Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eAppendix 1. Full Variable Definitions

The table below includes all variables included in this analysis (main or supplemental). Included covariates are either shown in existing literature to affect risk for SARS-CoV-2 infection or be related to SARS-CoV-2 related adverse health outcomes (which may also, indirectly, affect behaviours affected risk of infection). In all instances, measures were collected based on a Settler Canadian (Western) understanding of health-related factors and associated prevention guidelines appropriate during the COVID-19 pandemic.

Variable	Definition
Outcome	
SARS-CoV-2 period prevalence	SARS-CoV-2 infection among participants at the baseline interview. Answers include Yes or No. Category is determined using adjudicated participant self-report and biological sample results.[1]
SARS-CoV-2 incident infection	SARS-CoV-2 infection among participants without a history of infection at the baseline interview any time up to and including active SARS-CoV-2 infection during the 6-month interview. Answers include Yes or No. Category is determined using adjudicated participant self-report and biological sample results.[1]
Covariates	
Age	Participant's age as of the date of the baseline survey. Calculated using the date of the survey and the participant's self-reported date of birth. Also expressed as age groups (16 to 29 years; 30 to 49 years; 50 to 69 years; and 70+ years).
Gender	Participant's self-reported gender, as of the date of the baseline survey. Answers include 'male', 'female', 'other' (which combines 'non-binary', 'gender queer', 'agender', 'transgender' or similar) and 'refused/don't know'. 'Refused/don't know' category is not included in modelling.
Citizenship status	Participant's self-reported citizenship status, as of the date of the baseline survey. Answers include 'Citizen', 'Landed immigrant' (also known as 'Permanent resident'), 'Refugee', 'Temporary/Other' and 'Refused/Don't know'). 'Refused/don't know' category is not included in modelling.
Immigration history	Recentness of participant immigration to Canada, as of the date of the baseline survey. Calculated from the Citizenship status and year of immigration variables. Categories include 'Born in Canada (n/a)', '10 or more years ago', and 'Less than 10 years ago'.
Education level	Participant's self-reported highest level of completed education, as of the baseline interview date. Answers include 'less than high school' (secondary school), 'high school', 'any-post-secondary' (which combines 'vocational/technical school', 'college/university', 'graduate/professional school'), or 'Refused/Don't know'. 'Refused/don't know' category is not included in modelling.

Variable	Definition
COVID-19 vaccination	Participant's receipt of Health-Canada approved COVID-19 vaccine by the baseline interview date. Answers are categorized into either: 1) One or more doses, or None (unvaccinated); or 2) None (unvaccinated), Incomplete primary series (One dose unless the dose is Johnson & Johnson), Complete primary series (2 dose or 1 dose of Johnson & Johnson) or Complete primary series and booster (3+ doses). Category is determined using a) participant self-report and b) participant biological sample results.[1]
Hypertension	Diagnosis by a physician of hypertension at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Diabetes	Diagnosis by a physician of diabetes at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Asthma	Diagnosis by a physician of asthma at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Lung disease (COPD, emphysema, or chronic bronchitis)	Diagnosis by a physician of chronic lung disease (including chronic obstructive pulmonary disease, emphysema or chronic bronchitis) at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Heart disease (heart attack, heart failure, or coronary artery disease)	Diagnosis by a physician of heart disease (including heart attack, heart failure or coronary artery disease) at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
History of stroke	History of stroke at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Chronic kidney disease	Diagnosis by a physician of chronic kidney disease at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Liver disease	Diagnosis by a physician of liver disease at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Chronic neurological disorder	Diagnosis by a physician of chronic neurological disorder at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Cancer	Diagnosis by a physician of cancer at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling

Variable	Definition
HIV/AIDS	Diagnosis by a physician of HIV/AIDS at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Immune Suppressed (other than HIV/AIDS)	Diagnosis by a physician of a non HIV/AIDS-related immune suppression at any point prior to the interview, self-reported by the participant. Answers include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling
Paid or volunteer work	Participant's self-reported work experience during the interval. Work includes any form of paid activity, and volunteer work includes any form of unpaid activity on behalf of another person or organization. Answers categorized into 'Yes' and 'No/Refused/Don't know'. 'Refused/don't know' category is not included in modelling.
Alcohol consumption	Consumption of alcohol by the participant during the interval, irrespective of frequency or quantity of consumption. Categories include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling.
Frequency of alcohol consumption	Average frequency of alcohol consumption by the participant during the interval, irrespective of quantity consumed. Categories include 'Never', 'Monthly or less', '2-4 times a month', '2-3 times a week' and '4+ times a week'. 'Refused/don't know' category is not included in modelling.
Tobacco consumption	Consumption of tobacco by the participant during the interval, irrespective of frequency or quantity of consumption. Categories include 'Yes' and 'No'. 'Refused/don't know' category is not included in modelling.
Frequency of tobacco consumption	Average frequency of tobacco consumption by the participant during the interval, irrespective of quantity consumed. Categories include 'Never', 'Less than daily', and 'Daily'. 'Refused/don't know' category is not included in modelling.
Consumption of illegal or prescription medication for non-medical reasons	Consumption of any illegal drug or prescription medication taken for non-medical reasons during the interval. Categories include 'No' or 'Yes'. Refused/don't know category is not included in modelling.
Observance of public health guidelines: wearing a face mask in public places	The participant's self-reported adherence to public health guidelines active in Ontario during the interval (specifically: the degree to which the participant wears a face mask when in public places). Answers include 'Low' (including Never/rarely/occasionally), 'High' (including 'Often/Always') and 'Refused/Don't know. 'Refused/don't know' category is not included in modelling.
Observance of public health guidelines: distancing in public places	The participant's self-reported adherence to public health guidelines active in Ontario during the interval (specifically: the degree to which the participant practices physical distancing while in public places). Answers include 'Low' (including Never/rarely/occasionally), 'High' (including 'Often/Always') and 'Refused/Don't know. 'Refused/don't know' category is not included in modelling.
Observance of public health guidelines: avoiding crowded places or gatherings	The participant's self-reported adherence to public health guidelines active in Ontario during the interval (specifically: the degree to which the participant avoids crowded places or gatherings). Answers include 'Low' (including

Variable	Definition
	Never/rarely/occasionally), 'High' (including 'Often/Always') and 'Refused/Don't know. 'Refused/don't know' category is not included in modelling.
Observance of public health guidelines: washing hands several times per day	The participant's self-reported adherence to public health guidelines active in Ontario during the interval (specifically: the degree to which the participant washes their hands with soap/hand sanitizer several times per day). Answers include 'Low' (including Never/rarely/occasionally), 'High' (including 'Often/Always') and 'Refused/Don't know. 'Refused/don't know' category is not included in modelling.
Proportion of interval spent in congregate (shared) homeless shelter	Proportion of the interval spent by the participant in congregate (shared sleeping space) homeless shelter(s). Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in non-congregate (private) homeless shelter	Proportion of the interval spent by the participant in non-congregate (private sleeping space) homeless shelter(s). Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in physical distancing hotel	Proportion of the interval spent by the participant in physical distancing hotel(s). Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in own place	Proportion of the interval spent by the participant in their own home/accommodation (ie. The participant is 'housed'). Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in High Exposure setting	Proportion of the interval spent by the participant in housing settings considered 'high exposure', ie. At highest risk of contracting SARS-CoV-2 due to crowding, turnover and/or congregate nature of sleeping/living setting(s). Includes the following housing types: congregate homeless shelter, recovery centre, nursing home, jail or immigration detention centre. Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in Moderate Exposure setting	Proportion of the interval spent by the participant in housing settings considered 'moderate exposure', ie. At less risk than 'High exposure' and greater risk than 'Low exposure' of contracting SARS-CoV-2 due to crowding, turnover and/or congregate nature of sleeping/living setting(s). Includes the following housing types: physical distancing hotel, non-congregate shelter, transitional housing, rooming house, encampment, on the street, rehab, hospital or 'other' settings. Minimum value = 0%; Maximum value = 100%
Proportion of interval spent in Low Exposure setting	Proportion of the interval spent by the participant in housing settings considered 'low exposure', ie. At least risk of contracting SARS-CoV-2 due to lower crowding, turnover and/or less congregate nature of sleeping/living setting(s). Includes the following housing types: own home, supportive housing, private hotel/motel, or staying with friends and family. Minimum value = 0%; Maximum value = 100%

Variable	Definition
Number of moves during the interval	Number of housing moves by the participant during the interval. Includes changes in residence (new housing episodes) as well as moves indicated by the participant during periods where housing was shared between two or more locations.
Average number of people who shared living space	Number of people sharing living space with the participants during the interval, on average. Reported in the housing history for each housing episode, this may thus represent the 'average of an average' where number with whom living space is shared fluctuated within a housing episode (for example, in a congregate homeless shelter) as well as between episodes.
Report after onset of the Omicron variant	Categorization of follow-up interview date as being before December 31 2021 or on or after December 31 2021. The Omicron variant became dominant (>99%) by the end of December, so the end of December was selected to ensure individuals identified as reporting 'during Omicron' were, if infected, almost certainly infected with this variant.

eAppendix 2. Adjudication of Self-report and Serology Results to Determine SARS-CoV-2 Infection

Where a positive PCR test was self-reported by the participant, this was accepted as-given. In the absence of a positive PCR test reported by the participant, we relied on detection of SARS-CoV-2 via PCR test administered during the interview [2] or antibodies detected by enzyme-linked immunosorbent assay (ELISA) from plasma and/or dried blood spot samples, also collected during the interview. The methodology regarding the ELISA are more fulsomely described elsewhere.[3] Briefly, the assays detect immunoglobulin (Ig)Gs against the spike protein trimer (SMT1), spike protein receptor-binding protein (RBD) and nucleocapsid protein (NP), with raw values normalised to a blank-subtracted reference point from the reference curve to create relative ratios. These in turn are calibrated to BAU/ml equivalents. Infection was deemed to have occurred where at least two out of three antibodies exceeded the positivity threshold (set at 3 standard deviations from the mean of the log distribution of monitored controls) [3]:

	Positivity threshold
Nucleocapsid protein	34.5 BAU/ml
Receptor-binding protein	31.0 BAU/ml
Spike protein	11.3 BAU/ml

Because participants may also have received one or more COVID-19 vaccines during the period, which affects RBD and Spike protein levels, we further assessed against self-reported vaccination status when only Spike and RBD were deemed positive; if the individual was vaccinated, we deemed those individuals not infected.

eAppendix 3. Baseline Characteristics of Participants

3A – Baseline characteristics of participants at baseline, by history of infection status (evidence of prior SARS-CoV-2 infection; no evidence of prior infection)

Participant demographics at baseline	Total (n=736)	No evidence of past infection (n=512)	Evidence of past infection (n=224)	P-values
Age, mean (SD)	46.08 (14.6)	45.93 (14.4)	46.43 (15.1)	0.788
Age category, N (%)				
16-29 years old	100 (13.59%)	68 (13.28%)	32 (14.29%)	
30-49 years old	326 (44.29%)	230 (44.92%)	96 (42.86%)	0.634
50-69 years old	263 (35.73%)	185 (36.13%)	78 (34.82%)	
70+ years old	47 (6.39%)	29 (5.66%)	18 (8.04%)	
Self-reported gender, N (%)				
Male	486 (66.03%)	334 (65.23%)	152 (67.86%)	
Female	231 (31.39%)	163 (31.84%)	68 (30.36%)	0.722
Other	17 (2.31%)	13 (2.54%)	4 (1.79%)	
Refused/Don't know	2 (0.27%)	2 (0.39%)	0 (0%)	
Citizenship status, N (%)				
Citizen	564 (76.63%)	398 (77.73%)	166 (74.11%)	
Landed immigrant	90 (12.23%)	66 (12.89%)	24 (10.71%)	
Refugee claimant	55 (7.47%)	33 (6.45%)	22 (9.82%)	0.017
Temporary/Other	20 (2.72%)	11 (2.15%)	9 (4.02%)	
Refused/Don't know	7 (0.95%)	4 (0.78%)	3 (1.33%)	
Immigration history, N (%)				
> 10 years ago	187 (25.41%)	139 (27.15%)	48 (21.43%)	
<= 10 years ago	108 (14.67%)	68 (13.28%)	40 (17.86%)	0.119
N/A (Born in Canada)	441 (59.92%)	305 (59.69%)	136 (60.71%)	
Top education completed, N (%)				
Less than high school	208 (28.26%)	149 (29.10%)	59 (26.34%)	
High school	255 (34.65%)	183 (35.74%)	72 (32.14%)	0.056

Participant demographics at baseline	Total (n=736)	No evidence of past infection (n=512)	Evidence of past infection (n=224)	P-values
Post-secondary	264 (35.87%)	173 (33.79%)	91 (40.63%)	
Refused/Don't know	9 (1.23%)	7 (1.37%)	2 (0.89%)	
Received one or more COVID-19 vaccine, N (%)				
Yes	585 (79.48%)	420 (82.03%)	165 (73.66%)	
No	143 (19.43%)	85 (16.60%)	58 (25.89%)	0.005
Missing serology	8 (1.09%)	7 (1.37%)	1 (0.44%)	
Health behaviors during latest reported interval				
Paid or volunteer work, N (%)	215 (29.21%)	148 (28.91%)	68 (30.36%)	0.691
Alcohol consumption	449 (61.01%)	305 (59.57%)	143 (63.84%)	0.269
Alcohol consumption frequency				
Never	282 (38.32%)	204 (39.84%)	79 (35.27%)	
Monthly or less	174 (23.64%)	118 (23.05%)	55 (24.55%)	
2-4 times a month	100 (13.59%)	70 (13.67%)	30 (13.39%)	
2-3 times a week	79 (10.73%)	54 (10.55%)	25 (11.16%)	0.688
4+ times a week	96 (13.04%)	63 (12.30%)	33 (14.73%)	
Refused/Don't know	5 (0.68%)	3 (0.59%)	2 (0.89%)	
Tobacco consumption	504 (68.48%)	355 (69.34%)	149 (66.52%)	0.623
Tobacco consumption frequency				
Never	230 (31.25%)	156 (30.47%)	74 (33.04%)	
Less than daily	435 (59.10%)	303 (59.18%)	132 (58.93%)	0.601
Daily	69 (9.38%)	52 (10.16%)	17 (7.59%)	
Refused/Don't know	2 (0.28%)	1 (0.20%)	1 (0.44%)	
PHG #1: wears face mask in public				
Good (Often or Always)	651 (88.45%)	455 (88.87%)	196 (87.50%)	
Poor (Never, Rarely or Occasionally)	83 (11.28%)	56 (10.94%)	27 (12.05%)	0.753
Refused/Don't know	2 (0.27%)	1 (0.20%)	1 (0.45%)	
PHG #2: distances in public places				
Good (Often or Always)	625 (84.92%)	437 (85.35%)	187 (83.48%)	0.809

Participant demographics at baseline	Total (n=736)	No evidence of past infection (n=512)	Evidence of past infection (n=224)	P-values
Poor (Never, Rarely or Occasionally)	102 (13.86%)	69 (13.48%)	34 (15.18%)	
Refused/Don't know	9 (1.22%)	6 (1.17%)	3 (1.34%)	
PHG #3: avoids crowded places or gatherings				
Good (Often or Always)	583 (79.21%)	406 (79.30%)	176 (78.57%)	
Poor (Never, Rarely or Occasionally)	140 (19.02%)	97 (18.95%)	44 (19.64%)	0.975
Refused/Don't know	13 (1.77%)	9 (1.76%)	4 (1.79%)	
PHG #4: washes hands with soap/sanitizer several times per day				
Good (Often or Always)	663 (90.08%)	461 (90.04%)	202 (90.18%)	
Poor (Never, Rarely or Occasionally)	70 (9.51%)	49 (9.57%)	21 (9.38%)	0.991
Refused/Don't know	3 (0.41%)	2 (0.39%)	1 (0.45%)	
Housing History in latest reported interval				
% in congregate shelter				
Mean (SD)	26.53 (40.6)	26.29 (40.1)	27.07 (41.7)	0.810
Median (IQR)	0.0 (0, 57)	0.0 (0, 54)	0.0 (0, 71)	0.837
% in non-congregate shelter				
Mean (SD)	13.46 (31.5)	13.54 (31.7)	13.69 (31.6)	0.953
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)	0.744
% in Physical Distancing Hotel				
Mean (SD)	40.83 (46.3)	41.73 (46.4)	38.78 (46.1)	0.427
Median (IQR)	5.9 (0, 100)	7.4 (0, 100)	3.8 (0, 100)	0.518
% in own place				
Mean (SD)	5.73 (20.2)	6.38 (20.8)	3.83 (18.0)	0.112
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)	0.012
% in High Exposure[1] setting				
Mean (SD)	27.75 (41.2)	27.39 (40.7)	28.56 (42.4)	0.723
Median (IQR)	0.0 (0, 69)	0.0 (0, 62)	0.0 (0, 80)	0.744
% in Moderate Exposure[2] setting				
Mean (SD)	19.68 (36.2)	19.35 (36.2)	20.84 (36.9)	0.609

Participant demographics at baseline		Total (n=736)	No evidence of past infection (n=512)	Evidence of past infection (n=224)	P-values
	Median (IQR)	0.0 (0, 15)	0.0 (0, 9)	0.0 (0, 25)	0.394
% in Low Exposure[3] setting					
	Mean (SD)	51.25 (46.4)	52.14 (46.4)	48.82 (46.5)	0.373
	Median (IQR)	54.5 (0, 100)	59.4 (0, 100)	36.9 (0, 100)	0.202
Average number of people who shared living space					
	Mean (SD)	5.38 (17.0)	5.02 (16.2)	6.20 (18.8)	0.387
	Median (IQR)	0.5 (0, 2)	0.3 (0, 2)	0.9 (0, 3)	0.279

SD=Standard deviation; IQR=Interquartile range; PHG=Public Health Guideline

[1] 'High exposure' includes time residing in a congregate homeless shelter, recovery centre, nursing home, jail or immigration detention centre

[2] 'Moderate exposure' includes time residing in a physical distancing hotel, non-congregate shelter, transitional housing, rooming house, encampment, on the street, rehab, hospital or 'other' settings.

[3] 'Low exposure' includes time residing in own home, supportive housing, private hotel/motel, or staying with friends and family

3B – Baseline characteristics of participants without history of infection at baseline, by follow-up status (>=1 follow-up; lost to follow-up)

Participant demographics at baseline	Total (n=512)	>1 Follow-up (n=415)	Lost to follow-up (n=97)	P-values
Age, mean (SD)	45.95 (14.4)	46.61 (14.5)	43.01 (14.0)	0.027
Age category, N (%)				
16-29 years old	68 (13.28%)	49 (11.81%)	19 (19.59%)	
30-49 years old	230 (44.92%)	183 (44.10%)	47 (48.45%)	0.082
50-69 years old	185 (36.13%)	158 (38.07%)	27 (27.84%)	
70+ years old	29 (5.66%)	25 (6.02%)	4 (4.12%)	
Self-reported gender, N (%)				
Male	334 (65.23%)	272 (65.54%)	62 (63.92%)	
Female	163 (31.84%)	134 (32.29%)	29 (29.90%)	0.182
Other	13 (2.54%)	8 (1.93%)	5 (5.15%)	
Refused/Don't know	2 (0.39%)	1 (0.24%)	1 (1.03%)	
Citizenship status, N (%)				
Citizen	398 (77.73%)	319 (76.87%)	46 (47.42%)	
Landed immigrant	66 (12.89%)	58 (13.98%)	23 (23.71%)	
Refugee claimant	33 (6.45%)	27 (6.51%)	3 (3.09%)	0.436
Temporary/Other	11 (2.15%)	8 (1.93%)	20 (20.62%)	
Refused/Don't know	4 (0.78%)	3 (0.72%)	1 (1.03%)	
Immigration history, N (%)				
> 10 years ago	139 (27.15%)	113 (27.23%)	26 (26.80%)	
<= 10 years ago	68 (13.28%)	56 (13.49%)	12 (12.37%)	0.946
N/A (Born in Canada)	305 (59.57%)	246 (59.42%)	59 (60.82%)	
Top education completed, N (%)				
Less than high school	149 (29.10%)	121 (29.16%)	28 (28.87%)	
High school	183 (35.74%)	144 (34.70%)	39 (40.21%)	
Post-secondary	173 (33.79%)	146 (35.18%)	27 (27.84%)	0.384
Refused/Don't know	7 (1.37%)	4 (0.97%)	3 (3.09%)	
One or more COVID-19 vaccine, N (%)				

Participant demographics at baseline	Total (n=512)	>1 Follow-up (n=415)	Lost to follow-up (n=97)	P-values
Yes	420 (82.03%)	343 (82.65%)	77 (79.38%)	
No	85 (16.60%)	68 (16.39%)	17 (17.53%)	0.719
Missing serology	7 (1.37%)	4 (0.97%)	3 (3.09%)	
Health behaviors during latest reported interval				
Paid or volunteer work, N (%)	154 (30.08%)	126 (30.36%)	28 (28.87%)	0.772
Alcohol consumption	332 (64.84%)	264 (63.61%)	68 (70.10%)	0.157
Alcohol consumption frequency				
Never	176 (34.38%)	149 (35.90%)	27 (27.84%)	
Monthly or less	144 (28.13%)	120 (28.92%)	24 (24.74%)	
2-4 times a month	65 (12.70%)	51 (12.29%)	14 (14.43%)	0.280
2-3 times a week	59 (11.52%)	46 (11.08%)	13 (13.40%)	
4+ times a week	64 (12.50%)	47 (11.33%)	17 (17.53%)	
Refused/Don't know	4 (0.78%)	2 (0.48%)	2 (2.06%)	
Tobacco consumption	359 (70.12%)	287 (69.16%)	72 (74.23%)	0.342
Tobacco consumption frequency				
Never	152 (29.69%)	127 (30.60%)	25 (25.77%)	
Less than daily	300 (58.59%)	241 (58.07%)	59 (60.82%)	0.581
Daily	59 (11.52%)	46 (11.08%)	13 (13.40%)	
Refused/Don't know	1 (0.20%)	1 (0.24%)	0 (0%)	
PHG #1: wears face mask in public				
Good (Often or Always)	440 (85.94%)	365 (87.95%)	75 (77.32%)	
Poor (Never, Rarely or Occasionally)	68 (13.28%)	47 (11.33%)	21 (21.65%)	0.024
Refused/Don't know	4 (0.78%)	3 (0.72%)	1 (1.03%)	
PHG #2: distances in public places				
Good (Often or Always)	435 (84.96%)	362 (87.23%)	73 (75.26%)	
Poor (Never, Rarely or Occasionally)	70 (13.67%)	50 (12.05%)	20 (20.62%)	0.002
Refused/Don't know	7 (1.37%)	3 (0.72%)	4 (4.12%)	
PHG #3: avoids crowded places or gatherings				
Good (Often or Always)	407 (79.49%)	341 (82.17%)	66 (68.04%)	0.008

Participant demographics at baseline	Total (n=512)	>1 Follow-up (n=415)	Lost to follow-up (n=97)	P-values
Poor (Never, Rarely or Occasionally)	94 (18.36%)	66 (15.90%)	28 (28.87%)	
Refused/Don't know	11 (2.15%)	8 (1.93%)	3 (3.09%)	
PHG #4: washes hands with soap/sanitizer several times per day				
Good (Often or Always)	454 (88.67%)	378 (91.08%)	76 (78.35%)	
Poor (Never, Rarely or Occasionally)	54 (10.55%)	34 (8.19%)	20 (20.62%)	0.001
Refused/Don't know	4 (0.78%)	3 (0.72%)	1 (1.03%)	
Housing History in latest reported interval				
% in congregate shelter				
Mean (SD)	22.65 (37.6)	23.42 (38.6)	19.39 (33.3)	0.344
Median (IQR)	0.0 (0, 30)	0.0 (0, 32)	0.0 (0, 20)	0.496
% in non-congregate shelter				
Mean (SD)	13.55 (31.5)	13.94 (32.3)	11.89 (27.9)	0.565
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 3)	0.384
% in Physical Distancing Hotel				
Mean (SD)	38.54 (45.6)	41.63 (46.3)	25.31 (40.1)	0.001
Median (IQR)	2.9 (0, 100)	7.8 (0, 100)	0.0 (0, 36)	0.007
% in own place				
Mean (SD)	6.84 (22.9)	6.15 (21.6)	9.80 (27.8)	0.159
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)	0.283
% in High Exposure[1] setting				
Mean (SD)	24.01 (38.4)	24.00 (39.0)	24.07 (36.3)	0.988
Median (IQR)	0.0 (0, 35)	0.0 (0, 38)	0.0 (0, 33)	0.204
% in Moderate Exposure[2] setting				
Mean (SD)	20.49 (36.1)	19.16 (35.3)	26.20 (39.1)	0.084
Median (IQR)	0.0 (0, 25)	0.0 (0, 18)	0.0 (0, 58)	0.032
% in Low Exposure[3] setting				
Mean (SD)	53.31 (45.8)	54.96 (45.8)	46.22 (45.0)	0.090
Median (IQR)	68.5 (0, 100)	75.0 (0, 100)	35.7 (0, 100)	0.050
Average number of people who shared living space				

Participant demographics at baseline	Total (n=512)	>1 Follow-up (n=415)	Lost to follow-up (n=97)	P-values
Mean (SD)	4.01 (11.7)	3.69 (10.1)	5.43 (16.8)	0.188
Median (IQR)	0.4 (0, 2)	0.2 (0, 2)	0.8 (0, 2)	0.181

SD=Standard deviation; IQR=Interquartile range; PHG=Public Health Guideline

[1] 'High exposure' includes time residing in a congregate homeless shelter, recovery centre, nursing home, jail or immigration detention centre

[2] 'Moderate exposure' includes time residing in a physical distancing hotel, non-congregate shelter, transitional housing, rooming house, encampment, on the street, rehab, hospital or 'other' settings.

[3] 'Low exposure' includes time residing in own home, supportive housing, private hotel/motel, or staying with friends and family

3C – Baseline characteristics of participants by inclusion in the main analysis (included; lost to follow-up/infected at baseline)

Participant demographics at baseline	Total (n=736)	Included (n=415)	Excluded (n=321)	P-values
Age, mean (SD)	46.08 (14.6)	46.61 (14.5)	45.40 (14.8)	0.263
Age category, N (%)				
16-29 years old	100 (13.59%)	49 (11.81%)	51 (15.89%)	
30-49 years old	326 (44.29%)	183 (44.10%)	143 (44.55%)	0.275
50-69 years old	263 (35.73%)	158 (38.07%)	105 (32.71%)	
70+ years old	47 (6.39%)	25 (6.02%)	22 (6.85%)	
Self-reported gender, N (%)				
Male	486 (66.03%)	272 (65.54%)	214 (66.67%)	
Female	231 (31.39%)	134 (32.29%)	97 (30.22%)	0.643
Other	17 (2.31%)	8 (1.93%)	9 (2.80%)	
Refused/Don't know	2 (0.27%)	1 (0.24%)	1 (0.31%)	
Citizenship status, N (%)				
Citizen	564 (76.63%)	319 (76.87%)	245 (76.32%)	
Landed immigrant	90 (12.23%)	58 (13.98%)	32 (9.97%)	
Refugee claimant	55 (7.47%)	27 (6.51%)	28 (8.72%)	0.047
Temporary/Other	20 (2.72%)	8 (1.93%)	12 (3.74%)	
Refused/Don't know	7 (0.95%)	3 (0.72%)	4 (2.24%)	
Immigration history, N (%)				
> 10 years ago	187 (25.41%)	113 (27.23%)	74 (23.05%)	
<= 10 years ago	108 (14.67%)	56 (13.49%)	52 (16.20%)	0.331
N/A (Born in Canada)	441 (59.92%)	246 (59.28%)	195 (60.75%)	
Top education completed, N (%)				
Less than high school	208 (28.26%)	121 (29.16%)	87 (27.10%)	
High school	255 (34.65%)	144 (34.70%)	111 (34.58%)	0.394
Post-secondary	264 (35.87%)	146 (35.18%)	118 (36.76%)	
Refused/Don't know	9 (1.23%)	4 (0.97%)	5 (1.55%)	
One or more COVID-19 vaccine, N (%)				
Yes	585 (79.48%)	343 (82.65%)	242 (75.39%)	0.030

Participant demographics at baseline	Total (n=736)	Included (n=415)	Excluded (n=321)	P-values
No	143 (19.43%)	68 (16.39%)	75 (23.36%)	
Missing serology	8 (1.09%)	4 (0.97%)	4 (1.24%)	
Health behaviors during latest reported interval				
Paid or volunteer work, N (%)	215 (29.21%)	120 (28.92%)	96 (29.91%)	0.770
Alcohol consumption	449 (61.01%)	237 (57.11%)	211 (65.73%)	0.027
Alcohol consumption frequency				
Never	282 (38.32%)	177 (42.65%)	106 (33.02%)	
Monthly or less	174 (23.64%)	94 (22.65%)	79 (24.61%)	
2-4 times a month	100 (13.59%)	56 (13.49%)	44 (13.71%)	
2-3 times a week	79 (10.73%)	41 (9.88%)	38 (11.84%)	0.119
4+ times a week	96 (13.04%)	46 (11.08%)	50 (15.58%)	
Refused/Don't know	5 (0.68%)	1 (0.24%)	4 (1.24%)	
Tobacco consumption	504 (68.48%)	283 (68.19%)	221 (68.85%)	0.666
Tobacco consumption frequency				
Never	230 (31.25%)	131 (31.57%)	99 (30.84%)	
Less than daily	435 (59.10%)	244 (58.80%)	191 (59.50%)	0.845
Daily	69 (9.38%)	39 (9.40%)	30 (9.35%)	
Refused/Don't know	2 (0.28%)	1 (0.24%)	1 (0.31%)	
PHG #1: wears face mask in public				
Good (Often or Always)	651 (88.45%)	380 (91.57%)	271 (84.42%)	
Poor (Never, Rarely or Occasionally)	83 (11.28%)	35 (8.43%)	48 (14.95%)	0.005
Refused/Don't know	2 (0.27%)	0 (0%)	2 (0.62%)	
PHG #2: distances in public places				
Good (Often or Always)	625 (84.92%)	364 (87.71%)	260 (81.00%)	
Poor (Never, Rarely or Occasionally)	102 (13.86%)	49 (11.81%)	54 (16.82%)	0.014
Refused/Don't know	9 (1.22%)	2 (0.48%)	7 (2.18%)	
PHG #3: avoids crowded places or gatherings				
Good (Often or Always)	583 (79.21%)	340 (81.93%)	242 (75.39%)	
Poor (Never, Rarely or Occasionally)	140 (19.02%)	69 (16.63%)	72 (22.43%)	0.094

Participant demographics at baseline	Total (n=736)	Included (n=415)	Excluded (n=321)	P-values
Refused/Don't know	13 (1.77%)	6 (1.45%)	7 (2.18%)	
PHG #4: washes hands with soap/sanitizer several times per day				
Good (Often or Always)	663 (90.08%)	385 (92.77%)	278 (86.60%)	
Poor (Never, Rarely or Occasionally)	70 (9.51%)	29 (6.99%)	41 (12.77%)	0.020
Refused/Don't know	3 (0.41%)	1 (0.24%)	2 (0.62%)	
Housing History in latest reported interval				
% in congregate shelter				
Mean (SD)	26.53 (40.6)	27.88 (41.4)	24.78 (39.5)	0.305
Median (IQR)	0.0 (0, 57)	0.0 (0, 70)	0.0 (0, 36)	0.686
% in non-congregate shelter				
Mean (SD)	13.46 (31.5)	13.94 (32.6)	13.11 (30.5)	0.724
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)	0.220
% in Physical Distancing Hotel				
Mean (SD)	40.83 (46.3)	45.57 (47.0)	34.71 (44.7)	0.002
Median (IQR)	5.9 (0, 100)	22.7 (0, 100)	0.0 (0, 100)	0.009
% in own place				
Mean (SD)	5.73 (20.2)	5.58 (18.7)	5.64 (21.6)	0.970
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)	0.098
% in High Exposure[1] setting				
Mean (SD)	27.75 (41.2)	28.15 (41.6)	27.23 (40.7)	0.765
Median (IQR)	0.0 (0, 69)	0.0 (0, 70)	0.0 (0, 63)	0.363
% in Moderate Exposure[2] setting				
Mean (SD)	19.68 (36.2)	17.77 (35.3)	22.43 (37.6)	0.085
Median (IQR)	0.0 (0, 15)	0.0 (0, 4)	0.0 (0, 32)	0.011
% in Low Exposure[3] setting				
Mean (SD)	51.25 (46.4)	53.52 (46.6)	48.04 (46.0)	0.111
Median (IQR)	54.5 (0, 100)	64.2 (0, 100)	36.9 (0, 100)	0.023
Average number of people who shared living space				
Mean (SD)	5.38 (17.0)	4.92 (16.1)	5.97 (18.2)	0.411

Participant demographics at baseline	Total (n=736)	Included (n=415)	Excluded (n=321)	P-values
Median (IQR)	0.5 (0, 2)	0.1 (0, 2)	0.9 (0, 3)	0.077

SD=Standard deviation; IQR=Interquartile range; PHG=Public Health Guideline

[1] 'High exposure' includes time residing in a congregate homeless shelter, recovery centre, nursing home, jail or immigration detention centre

[2] 'Moderate exposure' includes time residing in a physical distancing hotel, non-congregate shelter, transitional housing, rooming house, encampment, on the street, rehab, hospital or 'other' settings.

[3] 'Low exposure' includes time residing in own home, supportive housing, private hotel/motel, or staying with friends and family

eAppendix 4. Characteristics of Participants Without History of Infection at Baseline, by Incident Infection Status by 6 Months (415 Participants; 716 Intervals)

Participant characteristics reported at baseline	Total (n=415)	No incident infection (n=291)	Incident infection (n=124)
Age, mean (SD)	46.64 (14.5)	46.26 (13.9)	47.52 (15.7)
Age category, N (%)			
16-29 years old	49 (11.81%)	37 (12.71%)	12 (9.68%)
30-49 years old	183 (44.10%)	124 (42.61%)	59 (47.58%)
50-69 years old	158 (38.07%)	115 (39.52%)	43 (34.68%)
70+ years old	25 (6.02%)	15 (5.15%)	10 (8.06%)
Self-reported gender, N (%)			
Male	272 (65.54%)	185 (63.57%)	87 (70.16%)
Female	134 (32.29%)	99 (34.02%)	35 (28.23%)
Other	8 (1.93%)	6 (2.06%)	2 (1.61%)
Refused/Don't know	1 (0.20%)	1 (0.40%)	0 (0.00%)
Citizenship status, N (%)			
Citizen	319 (76.87%)	228 (78.35%)	91 (73.39%)
Landed immigrant	58 (13.98%)	38 (13.06%)	20 (16.13%)
Refugee claimant	27 (6.51%)	19 (6.53%)	8 (6.45%)
Temporary/Other	8 (1.93%)	5 (1.72%)	3 (2.42%)
Refused/Don't know	3 (0.70%)	1 (0.40%)	2 (1.60%)
Immigration history, N (%)			
> 10 years ago	113 (27.23%)	74 (25.43%)	39 (31.45%)
<= 10 years ago	56 (13.49%)	31 (10.65%)	25 (20.16%)
N/A (Born in Canada)	246 (59.28%)	186 (63.92%)	60 (48.39%)
Top education completed, N (%)			
Less than high school	121 (29.16%)	82 (28.18%)	39 (31.45%)
High school	144 (34.70%)	99 (34.02%)	45 (36.29%)
Post-secondary	146 (35.18%)	108 (37.11%)	38 (30.65%)
Refused/Don't know	4 (1.00%)	2 (0.70%)	2 (1.60%)
Comorbidities, N (%)			
Hypertension	67 (16.14%)	45 (15.46%)	22 (17.74%)

Participant characteristics reported at baseline	Total (n=415)	No incident infection (n=291)	Incident infection (n=124)
Diabetes	51 (12.29%)	38 (13.06%)	13 (10.48%)
Asthma	88 (21.20%)	65 (22.34%)	23 (18.55%)
Lung disease (COPD, emphysema, or chronic bronchitis)	36 (8.67%)	28 (9.62%)	8 (6.45%)
Heart disease (heart attack, heart failure, or coronary artery disease)	20 (4.82%)	14 (4.81%)	6 (4.84%)
History of stroke	17 (4.10%)	11 (3.78%)	6 (4.84%)
Chronic kidney disease	9 (2.17%)	6 (2.06%)	3 (2.42%)
Liver disease	23 (5.54%)	18 (6.19%)	5 (4.03%)
Chronic neurological disorder	30 (7.23%)	22 (7.56%)	8 (6.45%)
Cancer	24 (5.78%)	13 (4.47%)	11 (8.87%)
HIV/AIDS	7 (1.69%)	6 (2.06%)	1 (0.81%)
Immune Suppressed (other than HIV/AIDS)	13 (3.13%)	9 (3.09%)	4 (3.23%)
COVID-19 vaccines received by the baseline interview, N (%)			
None	78 (18.80%)	59 (20.27%)	19 (15.32%)
Incomplete primary series	68 (16.39%)	45 (15.46%)	23 (18.55%)
Complete primary series (2 dose or 1 dose of Johnson & Johnson)	265 (63.86%)	184 (63.23%)	81 (65.32%)
Complete primary series and booster	4 (0.96%)	3 (1.03%)	1 (0.81%)

Health behaviors during latest reported interval	Total (n=721)	No seroconversion (n=597)	Seroconversion (n=124)
Paid or volunteer work, N (%)	205 (28.43%)	167 (27.97%)	38 (30.65%)
Alcohol consumption, N (%)	408 (56.59%)	326 (54.61%)	82 (66.13%)
Alcohol consumption frequency, N (%)			
Never	311 (43.13%)	270 (45.23%)	41 (33.06%)
Monthly or less	168 (23.30%)	133 (22.28%)	35 (28.23%)
2-4 times a month	95 (13.18%)	74 (12.40%)	21 (16.94%)
2-3 times a week	70 (9.71%)	53 (8.88%)	17 (13.71%)
4+ times a week	75 (10.40%)	66 (11.06%)	9 (7.26%)
Refused/Don't know	2 (0.30%)	1 (0.20%)	1 (0.80%)
Tobacco consumption, N (%)	474 (65.74%)	395 (66.16%)	79 (63.71%)
Tobacco consumption frequency, N (%)			
Never	245 (33.98%)	201 (33.67%)	44 (35.48%)

Participant characteristics reported at baseline	Total (n=415)	No incident infection (n=291)	Incident infection (n=124)
Less than daily	60 (8.32%)	45 (7.54%)	15 (12.10%)
Daily	414 (57.42%)	350 (58.63%)	64 (51.61%)
Refused/Don't know	2 (0.3%)	1 (0.2%)	1 (0.8%)
Consumption of illegal or prescription medication for non-medical reasons, N (%)	158 (21.91%)	132 (22.11%)	26 (20.97%)
PHG #1: wears face mask in public			
Good (Often or Always)	666 (92.37%)	554 (92.80%)	112 (90.32%)
Poor (Never, Rarely or Occasionally)	55 (7.63%)	43 (7.20%)	12 (9.68%)
PHG #2: distances in public places			
Good (Often or Always)	646 (89.60%)	537 (89.95%)	109 (87.90%)
Poor (Never, Rarely or Occasionally)	72 (9.99%)	59 (9.88%)	13 (10.48%)
Refused/Don't know	3 (0.40%)	1 (0.20%)	2 (1.60%)
PHG #3: avoids crowded places or gatherings			
Good (Often or Always)	594 (82.39%)	492 (82.41%)	102 (82.26%)
Poor (Never, Rarely or Occasionally)	118 (16.37%)	97 (16.25%)	21 (16.94%)
Refused/Don't know	9 (1.30%)	8 (1.40%)	1 (0.80%)
PHG #4: washes hands with soap/sanitizer several times per day			
Good (Often or Always)	667 (92.51%)	551 (92.29%)	116 (93.55%)
Poor (Never, Rarely or Occasionally)	52 (7.21%)	44 (7.37%)	8 (6.45%)
Refused/Don't know	2 (0.28%)	2 (0.3%)	0 (0.0%)

Housing History in latest reported interval	Total (n=721)	No seroconversion (n=597)	Seroconversion (n=124)
% in congregate shelter			
Mean (SD)	25.52 (40.8)	24.77 (40.5)	29.15 (42.1)
Median (IQR)	0.0 (0, 55)	0.0 (0, 45)	0.0 (0, 70)
% in non-congregate shelter			
Mean (SD)	13.32 (32.3)	14.48 (33.6)	7.71 (24.2)
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)
% in Physical Distancing Hotel			
Mean (SD)	45.86 (47.3)	45.58 (47.3)	47.22 (47.3)

Participant characteristics reported at baseline	Total (n=415)	No incident infection (n=291)	Incident infection (n=124)
Median (IQR)	22.7 (0, 100)	18.8 (0, 100)	43.1 (0, 100)
% in own place			
Mean (SD)	8.68 (25.5)	8.92 (26.0)	7.50 (22.9)
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)
% in High Exposure[1] setting			
Mean (SD)	25.74 (40.9)	25.04 (40.6)	29.15 (42.1)
Median (IQR)	0.0 (0, 57)	0.0 (0, 47)	0.0 (0, 70)
% in Moderate Exposure[2] setting			
Mean (SD)	16.06 (34.3)	17.02 (35.3)	11.45 (28.9)
Median (IQR)	0.0 (0, 0)	0.0 (0, 0)	0.0 (0, 0)
% in Low Exposure[3] setting			
Mean (SD)	57.31 (46.8)	57.22 (46.9)	57.74 (46.5)
Median (IQR)	100.0 (0, 100)	100.0 (0, 100)	100.0 (0, 100)
Number of moves during period			
Mean (SD)	3.56 (4.5)	3.46 (4.4)	4.03 (5.0)
Median (IQR)	2.0 (1, 4)	2.0 (1, 4)	3.0 (1, 5)
Average number of people who shared living space			
Mean (SD)	4.34 (14.5)	4.05 (14.1)	5.72 (16.4)
Median (IQR)	0.0 (0, 2)	0.0 (0, 2)	1.0 (0, 4)
Interview after onset of Omicron as dominant variant, N (%)			
No	410 (56.87%)	390 (65.33%)	20 (16.13%)
Yes	311 (43.13%)	207 (34.67%)	104 (83.87%)

SD=Standard deviation; IQR=Interquartile range; PHG=Public Health Guideline; COPD= chronic obstructive pulmonary disease

[1] 'High exposure' includes time residing in a congregate homeless shelter, recovery centre, nursing home, jail or immigration detention centre

[2] 'Moderate exposure' includes time residing in a physical distancing hotel, non-congregate shelter, transitional housing, rooming house, encampment, on the street, rehab, hospital or 'other' settings.

[3] 'Low exposure' includes time residing in own home, supportive housing, private hotel/motel, or staying with friends and family

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